ANALYTICAL REPORT

Eurofins TestAmerica, Houston 6310 Rothway Street Houston, TX 77040 Tel: (713)690-4444

Laboratory Job ID: 600-185383-1

Client Project/Site: ITC WW-20190513-002-Day11

For:

Cardno, Inc 970 Wedgewood Drive Crystal Lake, Illinois 60014

Attn: Ms. Cheryl Hennessy

Dean a Jones

Authorized for release by: 6/5/2019 5:20:47 PM

Dean Joiner, Project Manager II (713)690-4444

dean.joiner@testamericainc.com

·····LINKS ······

Review your project results through

Total Access

Have a Question?



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

2

4

5

6

R

9

11

12

13

14

·

Table of Contents	
Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions/Glossary	7
Surrogate Summary	8
QC Sample Results	10
QC Association Summary	14
Lab Chronicle	16
Certification Summary	17
Chain of Custody	19
Field Data Sheets	26
Receipt Checklists	27

Case Narrative

Client: Cardno, Inc

Project/Site: ITC WW-20190513-002-Day11

Job ID: 600-185383-1

Job ID: 600-185383-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative 600-185383-1

Comments

No additional comments.

Receipt

The sample was received on 5/14/2019 5:04 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC

Method(s) 531.1: The continuing calibration verification (CCV) associated with batch 680-571908 recovered outside acceptance criteria. low biased, for Carbaryl. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8081A: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 600-265085 and analytical batch 600-265202 recovered outside control limits for the following analytes: Dicofol. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 608: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 600-265085 and analytical batch 600-265203 recovered outside control limits for the following analytes: Dicofol. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 608: The continuing calibration verification (CCV) associated with batch 600-265203 recovered above the upper control limit for Toxaphene (55.3%). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 600-265203/5).

Method(s) 8081A: The continuing calibration verification (CCV) associated with batch 600-265202 recovered above the upper control limit for Toxaphene(56.5%). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 600-265202/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with Nonylphenols aqueous in preparation batch 320-297813.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Cardno, Inc

Project/Site: ITC WW-20190513-002-Day11

Method	Method Description	Protocol	Laboratory
625	Semivolatile Organic Compounds (GC/MS)	40CFR136A	TAL CC
Organotins/GCMS	Organotins (GC/MS)	TAL SOP	TAL BUR
WS-MS-0010	Nonylphenols	TAL SOP	TAL SAC
608	Organochlorine Pesticides in Water	40CFR136A	TAL HOU
531.1	Carbamate Pesticides (HPLC)	EPA	TAL SAV
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUR
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SAC
608	Liquid-Liquid Extraction (Separatory Funnel)	40CFR136A	TAL HOU
CWA_Prep_CLLE	Liquid-Liquid Extraction (Continuous)	40CFR136A	TAL CC

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

TAL CC = Eurofins TestAmerica, Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Job ID: 600-185383-1

Sample Summary

Client: Cardno, Inc

Project/Site: ITC WW-20190513-002-Day11

Job ID: 600-185383-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-185383-1	WW-20190513-002-Day11	Water	05/13/19 11:30	05/14/19 17:04	

6

8

9

11

12

14

Client Sample Results

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

Client Sample ID: WW-20190513-002-Day11

Lab Sample ID: 600-185383-1 Date Collected: 05/13/19 11:30 **Matrix: Water**

Date Received: 05/14/19 17:04

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.861	U	10.0	0.861	ug/L		05/20/19 10:00	05/21/19 12:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	82		26 - 120				05/20/19 10:00	05/21/19 12:59	
2-Fluorobiphenyl	77		22 - 120				05/20/19 10:00	05/21/19 12:59	1
Terphenyl-d14	84		10 - 134				05/20/19 10:00	05/21/19 12:59	1
Phenol-d5 (Surr)	80		10 - 120				05/20/19 10:00	05/21/19 12:59	1
2-Fluorophenol	76		10 - 120				05/20/19 10:00	05/21/19 12:59	1
2,4,6-Tribromophenol	82		24 - 131				05/20/19 10:00	05/21/19 12:59	1
Method: Organotins/GCMS - 0	Organotins ((GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TributyItin	0.0450	U	0.0450	0.0450	ug/L		05/17/19 13:00	05/22/19 11:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	89		15 - 150				05/17/19 13:00	05/22/19 11:35	1
Method: WS-MS-0010 - Nonyl Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Nonylphenol	1.60	U	5.00	1.60	ug/L		05/29/19 14:22	06/05/19 01:06	1
Bisphenol-A	0.320	U	1.00	0.320	ug/L		05/29/19 14:22	06/05/19 01:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-nonylphenol monoethoxylate (Surr)	88		47 - 138				05/29/19 14:22	06/05/19 01:06	1
Method: 608 - Organochlorine	e Pesticides	in Water							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dicofol	0.200	U	0.200	0.200	ug/L		05/15/19 13:58	05/16/19 20:47	1
							05/45/40 42:50	05/46/40 20:47	1
	0.0200	U	0.200	0.0200	ug/L		05/15/19 13:58	05/16/19 20:47	
Mirex	0.0200 %Recovery		0.200 Limits	0.0200	ug/L		Prepared	Analyzed	
Mirex Surrogate				0.0200	ug/L				Dil Fac
Mirex Surrogate Tetrachloro-m-xylene	%Recovery		Limits	0.0200	ug/L		Prepared 05/15/19 13:58	Analyzed	Dil Fac
Mirex Surrogate Tetrachloro-m-xylene DCB Decachlorobiphenyl Method: 531.1 - Carbamate Pe	%Recovery 82 105	Qualifier	Limits 32 - 143	0.0200	ug/L		Prepared 05/15/19 13:58	Analyzed 05/16/19 20:47	Dil Fac
Mirex Surrogate Tetrachloro-m-xylene DCB Decachlorobiphenyl	%Recovery 82 105 esticides (H	Qualifier	Limits 32 - 143	0.0200 MDL		D	Prepared 05/15/19 13:58	Analyzed 05/16/19 20:47	Dil Fac

Definitions/Glossary

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

Qualifiers

GC/MS Semi VOA

U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier Qualifier Description

LCS or LCSD is outside acceptance limits.

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier Qualifier Description

U Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)
LOD Limit of Detection (DoD/DOE)
LOQ Limit of Quantitation (DoD/DOE)

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

4

5

6

7

10

1 1

13

14

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

_			Pe	ercent Surre	ogate Reco	very (Accer	tance Lim
		NBZ	FBP	TPHL	PHL	2FP	TBP
Lab Sample ID	Client Sample ID	(26-120)	(22-120)	(10-134)	(10-120)	(10-120)	(24-131)
600-185383-1	WW-20190513-002-Day11	82	77	84	80	76	82
LCS 560-162785/2-A	Lab Control Sample	82	77	90	70	68	81
LCSD 560-162785/3-A	Lab Control Sample Dup	81	82	89	65	61	79
MB 560-162785/1-A	Method Blank	83	78	89	68	68	75

Surrogate Legend

NBZ = Nitrobenzene-d5

FBP = 2-Fluorobiphenyl

TPHL = Terphenyl-d14

PHL = Phenol-d5 (Surr)

2FP = 2-Fluorophenol

TBP = 2,4,6-Tribromophenol

Method: Organotins/GCMS - Organotins (GC/MS)

Matrix: Water Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)
		TPTT	
Lab Sample ID	Client Sample ID	(15-150)	
600-185383-1	WW-20190513-002-Day11	89	
LCS 200-143150/2-A	Lab Control Sample	85	
LCSD 200-143150/3-A	Lab Control Sample Dup	97	
MB 200-143150/1-A	Method Blank	83	
Surrogate Legend			
TPTT = Tripentyltin			

Method: WS-MS-0010 - Nonylphenols

Matrix: Water Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)
		4NPME	
Lab Sample ID	Client Sample ID	(47-138)	
600-185383-1	WW-20190513-002-Day11	88	
LCS 320-297813/2-A	Lab Control Sample	104	
LCSD 320-297813/3-A	Lab Control Sample Dup	112	
MB 320-297813/1-A	Method Blank	79	
Surrogate Legend			

Method: 608 - Organochlorine Pesticides in Water

Matrix: Water Prep Type: Total/NA

_			Pe
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(32-143)	(36-144)
600-185383-1	WW-20190513-002-Day11	82	105
LCS 600-265085/2-A	Lab Control Sample	87	89
LCS 600-265085/9-A	Lab Control Sample	94	102
LCSD 600-265085/10-A	Lab Control Sample Dup	90	98
LCSD 600-265085/3-A	Lab Control Sample Dup	80	90

Eurofins TestAmerica, Houston

Page 8 of 31 6/5/2019

2

4

Ω

9

11

12

1 4

Surrogate Summary

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

DCBP = DCB Decachlorobiphenyl

Method: 608 - Organochlorine Pesticides in Water (Continued)

Matrix: Water Prep Type: Total/NA

			Percen	t Surrogate Recovery	(Acceptance Limits)	
Lab Sample ID MB 600-265085/1-A	Client Sample ID Method Blank	TCX1 (32-143) 68	DCBP1 (36-144) 79			
Surrogate Legend TCX = Tetrachloro-m-x	ylene					

8

10

12

1/

Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

Method: 625 - Semivolatile Organic Compounds (GC/MS)

MB MB

Lab Sample ID: MB 560-162785/1-A

Matrix: Water

Client: Cardno, Inc

Analysis Batch: 162809

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 162785

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.861	U	10.0	0.861	ug/L		05/20/19 10:00	05/21/19 09:35	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	83		26 - 120	05/20/19 10:00	05/21/19 09:35	1
2-Fluorobiphenyl	78		22 - 120	05/20/19 10:00	05/21/19 09:35	1
Terphenyl-d14	89		10 - 134	05/20/19 10:00	05/21/19 09:35	1
Phenol-d5 (Surr)	68		10 - 120	05/20/19 10:00	05/21/19 09:35	1
2-Fluorophenol	68		10 - 120	05/20/19 10:00	05/21/19 09:35	1
2,4,6-Tribromophenol	75		24 - 131	05/20/19 10:00	05/21/19 09:35	1

Lab Sample ID: LCS 560-162785/2-A

Matrix: Water

Analysis Batch: 162809

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 162785**

%Rec.

Spike LCS LCS Analyte Added Result Qualifier Limits Unit %Rec 2,4,5-Trichlorophenol 200 50 - 120 161.5 ug/L 81

LCS LCS Surrogate %Recovery Qualifier Limits Nitrobenzene-d5 26 - 120 82 2-Fluorobiphenyl 77 22 - 120 Terphenyl-d14 90 10 - 134 Phenol-d5 (Surr) 70 10 - 120 2-Fluorophenol 68 10 - 120 2,4,6-Tribromophenol 24 - 131 81

Lab Sample ID: LCSD 560-162785/3-A

Matrix: Water

Analysis Batch: 162809

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA **Prep Batch: 162785**

	Spike	LCSD LCSD				%Rec.		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4,5-Trichlorophenol	200	158.6	ug/L		79	50 - 120	2	40.0

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Nitrobenzene-d5	81		26 - 120
2-Fluorobiphenyl	82		22 - 120
Terphenyl-d14	89		10 - 134
Phenol-d5 (Surr)	65		10 - 120
2-Fluorophenol	61		10 - 120
2,4,6-Tribromophenol	79		24 - 131

Method: Organotins/GCMS - Organotins (GC/MS)

Lab Sample ID: MB 200-143150/1-A

Matrix: Water

Analysis Batch: 143256

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 143150

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Tributyltin 0.0450 U 0.0450 0.0450 ug/L 05/17/19 13:00 05/22/19 11:14

Eurofins TestAmerica, Houston

Page 10 of 31

6/5/2019

Client: Cardno, Inc Project/Site: ITC WW-20190513-002-Day11

Job ID: 600-185383-1

Method: Organotins/GCMS - Organotins (GC/MS) (Continued)

		MB	MB				
	Surrogate	%Recovery	Qualifier	Limits	Prepared A	nalyzed	Dil Fac
l	Tripentyltin	83		15 - 150	05/17/19 13:00 05/2	22/19 11:14	1

Lab Sample ID: LCS 200-143150/2-A **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA **Analysis Batch: 143256 Prep Batch: 143150** LCS LCS Spike %Rec. Added Limits Analyte Result Qualifier Unit D %Rec

0.3636

ug/L

82

30 - 150

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 297813

0.445

LCS LCS Surrogate %Recovery Qualifier Limits Tripentyltin 15 - 150 85

Lab Sample ID: LCSD 200-143150/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Water

Analysis Batch: 143256

Tributyltin

Prep Batch: 143150 Spike LCSD LCSD %Rec. **RPD** Added Analyte Result Qualifier Limits RPD Limit Unit D %Rec Tributyltin 0.445 0.3957 ug/L 89 30 - 150 8 30

LCSD LCSD Surrogate %Recovery Qualifier Limits 15 - 150 Tripentyltin 97

Method: WS-MS-0010 - Nonylphenols

Lab Sample ID: MB 320-297813/1-A Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 299198

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nonylphenol	1.60	U	5.00	1.60	ug/L		05/29/19 14:22	06/04/19 23:32	1
Bisphenol-A	0.320	U	1.00	0.320	ug/L		05/29/19 14:22	06/04/19 23:32	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 47 - 138 05/29/19 14:22 06/04/19 23:32 4-nonylphenol monoethoxylate (Surr) 79

Lab Sample ID: LCS 320-297813/2-A

Matrix: Water

Analysis Batch: 299198

Client Sample ID: Lab Control Sample Prep Type: Total/NA **Prep Batch: 297813** LCS LCS %Rec.

Spike Added Analyte Result Qualifier Unit D %Rec Limits Nonylphenol 24.0 20.90 ug/L 87 35 - 133 ug/L Bisphenol-A 4.80 4.245 88 42 - 120

LCS LCS

Limits Surrogate %Recovery Qualifier 104 47 - 138 4-nonylphenol monoethoxylate

(Surr)

Eurofins TestAmerica, Houston

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

Method: WS-MS-0010 - Nonylphenols (Continued)

Lab Sample ID: LCSD 320-297813/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Water

Analysis Batch: 299198

Prep Type: Total/NA **Prep Batch: 297813**

7 mary ord Batom 200 roc							op De		
-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nonylphenol	 24.0	22.31		ug/L		93	35 - 133	7	35
Bisphenol-A	4.80	4.677		ug/L		97	42 - 120	10	35

LCSD LCSD

Surrogate %Recovery Qualifier Limits 47 - 138 4-nonylphenol monoethoxylate 112

Method: 608 - Organochlorine Pesticides in Water

Lab Sample ID: MB 600-265085/1-A **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 265203

MD MD

	IVID	IAID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dicofol	0.200	U	0.200	0.200	ug/L		05/15/19 08:41	05/16/19 16:37	1
Mirex	0.0200	U	0.200	0.0200	ug/L		05/15/19 08:41	05/16/19 16:37	1

MB MB Dil Fac Surrogate %Recovery Qualifier Limits Prepared Analyzed Tetrachloro-m-xylene 68 32 - 143 05/15/19 08:41 05/16/19 16:37 DCB Decachlorobiphenyl 79 36 - 144 05/15/19 08:41 05/16/19 16:37

Lab Sample ID: LCS 600-265085/2-A

Matrix: Water

Analysis Batch: 265203

Client Sample ID: Lab Control Sample Prep Type: Total/NA **Prep Batch: 265085**

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aldrin	 1.00	1.195		ug/L		119	42 - 122	
Dieldrin	1.00	1.306		ug/L		131	36 - 146	

LCS LCS Limits Surrogate %Recovery Qualifier 32 - 143 Tetrachloro-m-xylene 87 DCB Decachlorobiphenyl 89 36 - 144

Lab Sample ID: LCS 600-265085/9-A

Matrix: Water

Analysis Batch: 265203

Client Sample ID:	: Lab Control Sample
	Prop Type: Total/NA

Prep Type: Total/NA Prep Batch: 265085

Prep Batch: 265085

_	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Dicofol	4.00	6.908	*	ug/L		173	70 - 130	
Mirex	4.00	3.250		ug/L		81		

Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	94		32 - 143
DCB Decachlorobiphenyl	102		36 - 144

Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

Lab Sample ID: LCSD 600-265085/10-A

Client: Cardno, Inc

Matrix: Water

Method: 608 - Organochlorine Pesticides in Water (Continued)

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 265085 Analysis Batch: 265203 Spike LCSD LCSD %Rec. **RPD** Analyte Added Result Qualifier %Rec Limits RPD Limit Unit 4.00 7.007 175 70 - 130 20 NaN

Dicofol ug/L Mirex 4.00 3.324 ug/L 83 NaN LCSD LCSD

%Recovery Qualifier Limits Surrogate 32 - 143 Tetrachloro-m-xylene 90 DCB Decachlorobiphenyl 98 36 - 144

Lab Sample ID: LCSD 600-265085/3-A **Client Sample ID: Lab Control Sample Dup**

Matrix: Water

Prep Type: Total/NA **Analysis Batch: 265203 Prep Batch: 265085**

LCSD LCSD Spike %Rec. **RPD** Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Aldrin 1.00 1.211 121 42 - 122 20 ug/L Dieldrin 1.00 1.339 36 - 146 20 ug/L 134 2

LCSD LCSD Surrogate %Recovery Qualifier Limits 32 - 143 Tetrachloro-m-xylene 80 36 - 144 90 DCB Decachlorobiphenyl

Method: 531.1 - Carbamate Pesticides (HPLC)

Lab Sample ID: MB 680-571908/4 Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 571908

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Dil Fac Analyzed Carbaryl 0.250 U 2.50 0.250 ug/L 05/26/19 19:49

Lab Sample ID: LCS 680-571908/5 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 571908

Spike LCS LCS %Rec. Added Limits Analyte Result Qualifier Unit %Rec Carbaryl 10.0 10.08 ug/L 101 80 - 120

Lab Sample ID: LCSD 680-571908/6 Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

Matrix: Water

Analysis Batch: 571908

LCSD LCSD RPD Spike %Rec. Added **Analyte** Result Qualifier Unit D %Rec Limits RPD Limit Carbaryl 10.0 8.616 ug/L 86 80 - 120 16 20

6/5/2019

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

GC/MS Semi VOA

Prep Batch: 143150	Pre	рΒ	atc	h: 1	431	50
---------------------------	-----	----	-----	------	-----	----

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-185383-1	WW-20190513-002-Day11	Total/NA	Water	3510C	
MB 200-143150/1-A	Method Blank	Total/NA	Water	3510C	
LCS 200-143150/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 200-143150/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 143256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-185383-1	WW-20190513-002-Day11	Total/NA	Water	Organotins/GCM S	143150
MB 200-143150/1-A	Method Blank	Total/NA	Water	Organotins/GCM S	143150
LCS 200-143150/2-A	Lab Control Sample	Total/NA	Water	Organotins/GCM S	143150
LCSD 200-143150/3-A	Lab Control Sample Dup	Total/NA	Water	Organotins/GCM S	143150

Prep Batch: 162785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-185383-1	WW-20190513-002-Day11	Total/NA	Water	CWA_Prep_CLL E	-
MB 560-162785/1-A	Method Blank	Total/NA	Water	CWA_Prep_CLL E	
LCS 560-162785/2-A	Lab Control Sample	Total/NA	Water	CWA_Prep_CLL E	
LCSD 560-162785/3-A	Lab Control Sample Dup	Total/NA	Water	CWA_Prep_CLL E	

Analysis Batch: 162809

l	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
ē	600-185383-1	WW-20190513-002-Day11	Total/NA	Water	625	162785
ľ	MB 560-162785/1-A	Method Blank	Total/NA	Water	625	162785
l	_CS 560-162785/2-A	Lab Control Sample	Total/NA	Water	625	162785
L	_CSD 560-162785/3-A	Lab Control Sample Dup	Total/NA	Water	625	162785

Prep Batch: 297813

ſ	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
	600-185383-1	WW-20190513-002-Day11	Total/NA	Water	3510C
	MB 320-297813/1-A	Method Blank	Total/NA	Water	3510C
	LCS 320-297813/2-A	Lab Control Sample	Total/NA	Water	3510C
	LCSD 320-297813/3-A	Lab Control Sample Dup	Total/NA	Water	3510C

Analysis Batch: 299198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-185383-1	WW-20190513-002-Day11	Total/NA	Water	WS-MS-0010	297813
MB 320-297813/1-A	Method Blank	Total/NA	Water	WS-MS-0010	297813
LCS 320-297813/2-A	Lab Control Sample	Total/NA	Water	WS-MS-0010	297813
LCSD 320-297813/3-A	Lab Control Sample Dup	Total/NA	Water	WS-MS-0010	297813

GC Semi VOA

Prep Batch: 265085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-185383-1	WW-20190513-002-Day11	Total/NA	Water	608	<u> </u>

Eurofins TestAmerica, Houston

6/5/2019

Page 14 of 31

_

3

4

6

7

9

IU

12

13

14

QC Association Summary

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

GC Semi VOA (Continued)

Prep Batch: 265085 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-265085/1-A	Method Blank	Total/NA	Water	608	
LCS 600-265085/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 600-265085/9-A	Lab Control Sample	Total/NA	Water	608	
LCSD 600-265085/10-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 600-265085/3-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 265203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-185383-1	WW-20190513-002-Day11	Total/NA	Water	608	265085
MB 600-265085/1-A	Method Blank	Total/NA	Water	608	265085
LCS 600-265085/2-A	Lab Control Sample	Total/NA	Water	608	265085
LCS 600-265085/9-A	Lab Control Sample	Total/NA	Water	608	265085
LCSD 600-265085/10-A	Lab Control Sample Dup	Total/NA	Water	608	265085
LCSD 600-265085/3-A	Lab Control Sample Dup	Total/NA	Water	608	265085

HPLC/IC

Analysis Batch: 571908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-185383-1	WW-20190513-002-Day11	Total/NA	Water	531.1	
MB 680-571908/4	Method Blank	Total/NA	Water	531.1	
LCS 680-571908/5	Lab Control Sample	Total/NA	Water	531.1	
LCSD 680-571908/6	Lab Control Sample Dup	Total/NA	Water	531.1	

Lab Chronicle

Job ID: 600-185383-1 Client: Cardno, Inc

Project/Site: ITC WW-20190513-002-Day11

Client Sample ID: WW-20190513-002-Day11

Lab Sample ID: 600-185383-1 Date Collected: 05/13/19 11:30 **Matrix: Water**

Date Received: 05/14/19 17:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	CWA_Prep_CLLE			250 mL	1 mL	162785	05/20/19 10:00	OV56	TAL CC
Total/NA	Analysis	625		1			162809	05/21/19 12:59	GEF	TAL CC
Total/NA	Prep	3510C			1000 mL	5 mL	143150	05/17/19 13:00	CSB	TAL BUR
Total/NA	Analysis	Organotins/GCMS		1			143256	05/22/19 11:35	A1B	TAL BUR
Total/NA	Prep	3510C			1000 mL	.5 mL	297813	05/29/19 14:22	SJC	TAL SAC
Total/NA	Analysis	WS-MS-0010		1			299198	06/05/19 01:06	M1A	TAL SAC
Total/NA	Prep	608			250 mL	5.0 mL	265085	05/15/19 13:58	LER	TAL HOU
Total/NA	Analysis	608		1			265203	05/16/19 20:47	JAL	TAL HOU
Total/NA	Analysis	531.1		1	1 mL	1 mL	571908	05/27/19 06:19	UI	TAL SAV

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

TAL CC = Eurofins TestAmerica, Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Eurofins TestAmerica, Houston

6/5/2019

Accreditation/Certification Summary

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

Laboratory: Eurofins TestAmerica, Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program		EPA Region	Identification Number	Expiration Date
Texas	NELAP		6	T104704223-18-23	10-31-19
The following analytes	s are included in this reno	rt but the laboratory is	s not certified by the	e governing authority. This	s list may include analytes for whic
• ,	•	it, but the laberatory is	o not continou by the	s governing dathonty. This	s not may include unarytes for write
the agency does not d	•	Matrix	Analyte		s lot may include unaryted for write
the agency does not o	offer certification.	,	,	e	

Laboratory: Eurofins TestAmerica, Burlington

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
ANAB	DoD		L2336	02-25-20
Connecticut	State Program	1	PH-0751	09-30-19
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-01-20
Florida	NELAP	4	E87467	06-30-19 *
Minnesota	NELAP	5	050-999-436	12-31-19
New Hampshire	NELAP	1	2006	12-18-19
New Jersey	NELAP	2	VT972	06-30-19 *
New York	NELAP	2	10391	04-01-20
Pennsylvania	NELAP	3	68-00489	04-30-20
Rhode Island	State Program	1	LAO00298	12-30-19
US Fish & Wildlife	Federal		LE-058448-0	07-31-19
USDA	Federal		P330-11-00093	07-24-20
Vermont	State Program	1	VT-4000	12-31-19
Virginia	NELAP	3	460209	12-14-19

Laboratory: Eurofins TestAmerica, Corpus Christi

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority Oklahoma	Program State Program	EPA Region	Identification Number 2018-070	Expiration Date 08-31-19
Texas	NELAP	6	T104704210-19-23	03-31-20
USDA	Federal		P330-18-00314	10-31-21

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Program EPA Regio		Identification Number	Expiration Date
Texas	NELAP		6	T104704399	05-31-20
	•	rt, but the laboratory i	s not certified by the	e governing authority. Th	is list may include analytes for wh
the agency does not					
the agency does not t	oner certification.				
Analysis Method	Prep Method	Matrix	Analyt	e	
0 ,		Matrix Water	Analyt Bisphe		

Eurofins TestAmerica, Houston

2

3

5

7

Q

10

12

14

^{*} Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Cardno, Inc Job ID: 600-185383-1

Project/Site: ITC WW-20190513-002-Day11

Laboratory: Eurofins TestAmerica, Savannah

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Program		Identification Number	Expiration Date
Texas	NELAP		6	T104704185-19-12	11-30-19
The following analyte	s are included in this repor	t, but the laboratory is	not certified by the	e governing authority. This	list may include analytes for whi
The following analyte the agency does not	•	t, but the laboratory is	not certified by the	e governing authority. This	list may include analytes for whi
,	•	t, but the laboratory is Matrix	not certified by the		list may include analytes for whi

4

5

b

10

12

11

TestAmerica Canton

Chain of Custody Record



4101 Shuffel Street NW North Canton, OH 44720 Phone (330) 497-9396 Fax (330) 497-0772

Client Information	Sampler: C. P. M. Q.	· P	FDIO	Lab !	PM:				Carrier Tracking No(s):		COC No:
Client Contact:	Phone:	11-	FICE	E-Ma	il;	-					Page: Page 1 of 1
Corporary:							A	nalvsis F	Requested		Job #:
Address:	Due Date Requeste	ed:			T	T				T	Preservation Codes:
Corpony: CARCHO Address: 121 Continental DR. Suite. 308 City: NEWARK State, 2Tp: DE, 19713 Phone: 899-714-9856 Email LORI, Stone & Caredno.com Project Name: Site:	TAT Requested (da	ys):			1	0					A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S
DE, 19713	PO.#;				1	1	10				E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2SO3 G - Amchlor S - H2SO4
Email Op Strong @ Cardon com	WO #:				or No)	00	Shend	1			H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA
Project Name:	Project #:				Yes or	2	200	10		iners	K - EDTA W - ph 4-5 L - EDA Z - other (specify)
Site:	ssow#:				ample (FID	1	3		f containers	Other:
		Sample	Sample Type (C=comp,	Matrix (w=water, S=solid, O=waste/oli,	Field Filtered Sample (Yes or No)	EURO	NOA	DIC		Total Number of	
Sample Identification	Sample Date	Time		ation Code:				+++		X	Special Instructions/Note:
WW-20190513-002-Day 11	5/13/19	1130	Comp	, W	NN	XX	**	×		10	
					\parallel	1					
		-			H	-					
						600.1	E393	hain of Cus			
					+	-		l	stody		
					H						,
Possible Hazard Identification Non-Hazard Flammable Skin Irritant Pois	on B Unkno	own D	Radiologica		S		posal (A	fee may b	be assessed if samples are r		ed longer than 1 month) ive For Months
Deliverable Requested: I, II, III, IV, Other (specify)	ON B OTHER	,	tadiological		S			C Require		Aron	We I of Working
Empty Kit Relinquished by:		Date:			Time	3;		/	Method of Shipment	_	
Relinquished by:	Date/Time:	a		Company		Received	by:	1	Date/Finte:	14/11	a 7 m Company
Relinquished-by	5/13/19 Date/Time:	11101	1:04	Company		Received	by:	7011	Date Time	11	a Hall company
Relinguished by:	Date/Time:	11101	1.0-1	Company		Received	by:	, cu	Date/Time:		Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Cooler Te	mperature(s) °C and Oth	er Remarks:		

Sample Receipt Checklist

Loc: 600 185383 TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

3

5

5

7

9

11

13

			Date/Time Received:		<i>a</i> 1	719 MAY 14
JOB NUMBER:			CLIENT:	Cd	rano	13 LH1 14
UNPACKED BY:	M		CARRIER/DRIVER:	FI	nIT	AL
Custody Seal Present:	YES [NO	Number of Coolers Re	eceived: _		
Cooler ID	Temp Blank Y / N Y / N	Trip Blank	Observed Temp	Therm ID 676	Them CF	Corrected Temp
	Y/N	Y / N				
LABORATORY PRESER Base samples are>pH 12 pH paper Lot # VOA headspace acceptable	: YES [□NO	Acid preserved are <pl< td=""><td>D H 2:</td><td>☐ YES</td><td>□ NO</td></pl<>	D H 2:	☐ YES	□ NO
Did samples meet the lab	oratory's stand	ard conditions	of sample acceptability u	pon receipt'	?	
COMMENTS:						
			in okl	,11	<u> </u>	
		7/1	7 0)/	14/1	4	

Eurofins TestAmerica, Houston

6310 Rothway Street

Houston, TX 77040 Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record



eurofins

Environment Testing TestAmerica

Filolie (713) 030-4444 Fax (713) 030-3040							_										-	_		
Client Information (Sub Contract Lab)	Sampler:			Lab PN Joine		ап А						т-							COC No: 600-39525.1	
Client Contact: Shipping/Receiving	Phone:		-	E-Mail: dean.	ioine	r@tes	tame	ricain	ic con	n			te of O	rigin:					Page: Page 1 of 1	-
Company:	<u> </u>	_				ditations					-	110	, a3						Job#:	
TestAmerica Laboratories, Inc.	-					ΑP - Τ				-7.								6	600-185383-1	
Address: 30 Community Drive, Suite 11,	Due Date Requests 5/21/2019	ed:							Ana	alvsi	is Re	ane	ster	i				- 1	Preservation Cod	
City: South Burlington	TAT Requested (da	ıys):			Ý			Т		1.,0.						П			A - HCL B - NaOH	M - Hexane N - None
State, Zip: VT, 05403				:													İ	- 1	C - Zn Acetate D - Nitric Acid E - NaHSO4	O - AsNaO2 P - Na2O4S Q - Na2SO3
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:					Şino.													F - MeOH G - Amchlor	R - Na2S2O3 S - H2SO4
Email:	Wo #:				or No)	D) TBT									į				H - Ascorbic Acid I - Ice J - DI Water	T - TSP Dodecahydrate U - Acetone V - MCAA
Project Name:	Project #:				Se)	<u>@</u>									1		- 1	ᇎᅵ	K - EDTA L - EDA	W - pH 4-5
ITC WW-20190513-002-Day11	60010840					5									1		- ;	윤니		Z - other (specify)
Site:	SSOW#:				Samp	MS/35			1								١,	٦L	Other:	
			Campic	Matrix (w=water,	Filteted	Organotins_GCMS/3510C (MOD) TBT Only												Total Number		
		Sample			eld	gan											13	<u>.</u>		
Sample Identification - Client ID (Lab ID)	Sample Date	Time	G=grab) вт= Preservation		2	ō	7000	486-951	G F #0 C1	U 24 6	New alter	5.16.34	196 ₁₃	g -: ».;	- Certic	, i out	12	_	Special In	structions/Note:
		11:30	Preservation	i Code	XX			A.							22.5	250		X		
WW-20190513-002-Day11 (600-185383-1)	5/13/19	Central		Water	4	X			_	_		-		_	<u> </u>	\sqcup		2		
												\perp	1_	<u> </u>	_	\sqcup			_	
												\perp		L			-	i,		
					┸											Ш		<u>.</u>		
					ŀ															
																	3			
																		37		
										T								96.4 3.7		
Note: Since laboratory accreditations are subject to change, TestAmerica Labora currently maintain accreditation in the State of Origin listed above for analysis/les Laboratories, Inc. attention immediately. If all requested accreditations are curre	its/matrix being analyz	ed, the sample	s must be shipped	back to the	TestAr	merica l	laborat	tory or	other in	nstruct	tions wi	This II be p	sample rovided	shipr d. Any	ment is y chang	forward jes to a	ded un	der d tation	chain-of-custody. If n status should be b	the laboratory does not rought to TestAmerica
Possible Hazard Identification				· · · · · · · · · · · · · · · · · · ·	S	ample	Disp	osal	(Af	ee m	ay be	asse	essed	l if s	ampl			ine	d longer than 1	month)
Unconfirmed						\sqcup_R	Return	ToC	Client		L	J Disp	osal	By L	ab	L	<i>□</i> _A ,	rchi	ve For	Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank: 2	2		S	pecial	Instru	uction	ıs/QC	Req	uirem	ents:								
Empty Kit Relinquished by:		Date:			Time):							Met	hod of	f Shipn	nent:			· .	
Relinquished by: 400014	Date/Time	110	Cor	npany		Rece	eived b	ay	410	Ŋ	901	h	1		Date	/Time:	17	10	9 1026	Company TABUI
Relinquished by:	Date/Time:		Cor	npany		Rece	eived b	y: () `						Date	/Time:				Company
Relinquished by:	Date/Time:		Cor	npany		Rece	eived b	y:							Date	/Time:				Company
Custody Seals Intact: Custody Seal No.: 732	236,	232				Cool	er Tem	nperatu	ıre(s) °	C and	Other i	Remar	ks:		匀.	.0	, (٤ ـ ٤	3	
													_	_		-	_			

SHIP DATE: 16MAY19 ACTWGT: 20.00 LB MAN CAD: 0758523/CAFE3211

BILL RECIPIENT

SHIPPING/RECEIVING TESTAMERICA LABORATORIES, INC. 30 COMMUNITY DRIVE **SUITE 11 SOUTH BURLINGTON VT 05403**

1 of 2 TRK# 4840 2906 1472 STANDARD OVERNIGH

05403



HOUSTON, TX 77040 UNITED STATES US

SHIPPING/RECEIVING TËSTAMERICA LÆGGRATORIES, INC. 30 COMMUNITY DRIVE SULTE 11 **SOUTH BURLINGTON VT 05403**

FedEx

2 of 2 MPS# 4840 2906 1483 Mstr# 4840 2906 1472

SHIP DATE: 16MAY19 ACTWGT: 20 00 15 MAN CAD: 6768, 37 8 3211

0201

05403 BTV



Eurofins TestAmerica, Houston

6310 Rothway Street Houston, TX 77040 Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record



eurofins

Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler			Lab	PM: ner, De	ean	A			Carner Track	ing No(s):		CCC No: 600-39533.1	
Client Information (Sub Contract Lab)	Phone:			E-M	ail:			-t		State of Orig	n:		Page:	
Shipping/Receiving				dea		-	testameric	A PARTY CONTRACTOR OF THE PART		Texas			Page 1 of 1	
Company TestAmerica Laboratories, Inc.							- Texas	(See note).					600-185383-1	
Address	Due Date Requested	i:							D				Preservation Cod	les:
880 Riverside Parkway,	5/21/2019				-			Anai	ysis Re	quested	T T T		A - HCL	M - Hexane
City. West Sacramento	TAT Requested (days	sj:				ı							B - NaOH C - Zn Acetate D - Nitric Acid	N - None O - AsNaO2 P - Na2O4S
State, Zip: CA, 95605					Ш		ot List						E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
Phone 916-373-5600(Tel) 916-372-1059(Fax)	PO#:				<u>©</u>		28Day (MOD) Project List		1 1				G - Amchlor H - Ascorbic Acid I - Ice	S - H2SO4 T - TSP Dodecahydrate U - Acetone
Email:	WO#.				Sork	No)	GOW)					742	J - DI Water K - EDTA	V - MCAA W - pH 4-5
Project Name: ITC WW-20190513-002-Day11	Project # 60010840				le (Ye	es or	28Day					ntainers	L - EDA	Z - other (specify)
Site:	SSOW#				Samp							of con	Other:	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time		Matrix (W=water, S=solid, O=waste/ail, BT=Tissue, A=Ai tion Code:		Perform MS/M	Nonyiphenois/3510C					Total Number	Special In	structions/Note:
		11:30	Fieseiva		W	4						2		
WW-20190513-002-Day11 (600-185383-1)	5/13/19	Central		Water			X							
					+	+								
					Ħ	1								
					Ш									
Note: Since laboratory accreditations are subject to change, TestAmerica currently maintain accreditation in the State of Origin listed above for anal Laboratories, Inc. attention immediately. If all requested accreditations ar	vsis/tests/matrix being analyzed	d, the sample	s must be ship	ped back to th	e TestA	Ameri	ca laboratory	or other inst	tructions wi	This sample ship is the provided.	ipment is forwar Any changes to a	rded under accreditation	chain-of-custody. If on status should be b	the laboratory does not rought to TestAmerica
Possible Hazard Identification					s	Sam	ple Dispo	sal (A fee	may be	assessed it	samples are	e retaine	ed longer than 1	month)
Unconfirmed							Return T	o Client		Disposal By	Lab	- Arch	ive For	Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverab	ole Rank: 2	2		S	Spec	ial Instruct	tions/QC F	Requirem	ents:				
Empty Kit Relinquished by:		Date:			Time	e:				Method	of Shipment			
Relinquished by:	DateOfine	1)0	M	Company	A		eceived by	,			Date/Time	11.6	935	TA Saw
Relinquished by	Date/Tirrle:	10		Company	Ц	_	eceived by	der	Libra	2	Date/Time:		121	Company
Relinquished by:	Date/Time			Company		R	eceived by:				Date/Time:			Company
Custody Seals Intact: Custody Seal No.: 73	2 235				_	C	coler Tempe	rature(s) °C	and Other F	lemarks:		0	- goc	

Eurofins TestAmerica, Houston

6310 Rothway Street Houston, TX 77040

Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record



die eurofins

Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Join			Joine		an A					Carrier Tracking No(s):						COC No: 600-39527.1
Client Contact Shipping/Receiving	Phone:			E-Mail:	ioine	r@te	stamer	icainc	com			ate of C	rigin:				Page: Page 1 of 1
Company:				1	Accred	ditation	s Requir					OAGO					Job #:
TestAmerica Laboratories, Inc. Address:	Due Date Requeste	ed:		$\overline{}$	NELA	AP - T	exas										600-185383-1 Preservation Codes:
1733 N. Padre Island Drive,	5/21/2019					_		- 1	Analy	sis	Requ	este	1			_	A - HCL M - Hexane
City: Corpus Christi	TAT Requested (da	iys):															B - NaOH N - None C - Zn Acetate O - AsNaO2
State, Zip:	1			- 1													D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3
TX, 78408 Phone:	PO #:			\dashv													F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4
361-289-2673(Tel) 361-289-2471(Fax)	WO #:			-	No.	List											H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone
				_	No.	Custom List										52	J - DI Water V - MCAA
Project Name: ITC_WW-20190513-002-Day11	Project #: 60010840				e (Ye	D) Cu										containers	L - EDA Z - other (specify)
Site:	SSOW#:				ampl	(MO										of cor	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Type (W=v (C=comp, O=wait G=grab) BT=Tissu	olid, ste/oil, e, A=Air)	Field Filtered Sample (Yes or Perform MS/MSD (Yes or No)											Total Number o	
	><	$\geq \leq$	Preservation Co	ode:	∇											X	
WW-20190513-002-Day11 (600-185383-1)	5/13/19	11:30 Central	Wa	iter		X										2	
					\top		П										
					\top												
					T	T	\Box	\top	T			\top			\top		
					†		T				1	+					
					+	+	+	+	+		1	+			+		
Note: Since laboratory accreditations are subject to change, TestAmerica Laborat currently maintain accreditation in the State of Origin listed above for analysis/test Laboratories, Inc. attention immediately. If all requested accreditations are currently the state of the control of the state of the control of the state of the control of the state of the	s/matrix being analyze	ed, the sample	s must be shipped bac	k to the	TestAr	merica	laborato	ry or oth	er instru	uctions	es. This	sample	shipm d. Any	nent is fo changes	rwarded to accre	unde	r chain-of-custody. If the laboratory does not on status should be brought to TestAmerica
Possible Hazard Identification					Sa					may I	\neg				are re	etain	ed longer than 1 month)
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)	Primary Delivera	ble Pank: 3)		Sr		Return			auire		posal	By La	b		Arch	hive For Months
							mstruc	JUITSA	QU Ne	quire	ments						
Empty Kit Relinquished by: Relinquished by:	Ditto Finds	Date:	Compar		Time		aved by:			_		Iviet	nod of	Shipmer	r.	_	Company
- Cayle	5/10	Na	U	1		(l	چ		2			5	-(1-	19 9.50
Relinquished by:	Date/Time:		Compar	ny .		Rece	eived by:							Date/Ti	ne:		Company
Relinquished by:	Date/Time:		Compar	ny		Rece	eived by:							Date/Ti	ne:		Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Cool	ler Temp	erature(s) °C ar	d Othe	r Rema	rks:	21	0	-	0	1.6/-0.5CP
												-	_			_	Ver: 01/16/2019















	7	τ
	2	υ
(C	2
	(2
	h	·
	ċ	Š
	į	
	9	ږ
	c	χ
	_	٠,

6310 Rothway Street Houston, TX 77040 Phone (713) 690-4444 Fax (713) 690-5646	(Chain	of Cus	tody F	Rec	01	rd			HIII				1		*	eurofins	Environment 1 TestAmerica	esting
Client Information (Sub Contract Lab)	Sampler			Lab	PM ner, D	ean	ı A				Ca	arrier Trac	king No(s	5):	1		OC No 300-39534 1		
Client Contact: Shipping/Receiving	Phone:			E-M		or@	ntesta	merica	inc.com	,		ate of Ong	gin			F	Page		
Company.				uea	Accre	edita	ations Re	equired (See note		110	exas		_	-		Page 1 of 1		_
TestAmerica Laboratories, Inc. Address:	Due Date Requeste	od:			NEL	_AP	- Tex	as			_					_	500-185383-1		
5102 LaRoche Avenue.	5/21/2019	eu.							Ana	lysis	Requ	ested					Preservation Code A - HCL	M - Hexane	
City Savannah	TAT Requested (da	ays):															B - NaOH C - Zn Acetate	N - None O - AsNaO2	
State, Zip: GA, 31404	20.4					ı											D - Nitric Acid E - NaHSO4 F - MeOH	P - Na2O4S Q - Na2SO3 R - Na2S2O3	
Phone 912-354-7858(Tel) 912-352-0165(Fax)	PO#.				<u>@</u>	g,		+	1	1							G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahy	drate
Email:	WO #:				s or No	No)										50	l - Ice J - DI Water	U - Acetone V - MCAA	
Project Name: ITC: WW-20190513-002-Day11	Project #. 60010840				0	'es or		1				1				rtain	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)	
Site	SSOW#				Samp	MS/MSD (Y										5	Other:		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp,	Matrix (w-water, S-solid, O-wasteloil, BT=Tissue, A-A-A	eld Fift	Perform MS/II	531.1/ Carbaryl									Total Number	Special Inc	etructions/Net	
Sample Identification - Cheft ID (Lab ID)	Sample Date	7111116		tion Code:		Z	9			710		101		103		7	Special ins	structions/Note	
WW-20190513-002-Day11 (600-185383-1)	5/13/19	11:30 Central		Water	Ĭ		X									2			
					11	-													
					+	+	-		-	4		-	+	+	-				
					++	+	+		-	+		+	+	+-		+			
	-				+	+	+	+		+-	-	+	+	+					
					+	+	+	+	\vdash	+			+	+					
					††			\top	\Box			11	+	T					
					T														
Note: Since laboratory accreditations are subject to change, TestAmerica currently maintain accreditation in the State of Origin listed above for ana Laboratories, Inc. attention immediately. If all requested accreditations a	lysis/tests/matrix being analyz	ed, the sample	es must be ship	ped back to the	ne Test	Ame	erica lab	oratory o	r other in	structions									
Possible Hazard Identification					1	San	7			e may				les ar			d longer than 1		
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank:	2		- 19	Spe		urn To structio	100	Require		posal B	y Lab	_	_ Ar	rchi	ve For	Months	
Empty Kit Relinquished by:		Date:		_	Tim	e:	_		-		_	Metho	d of Ship	ment	_	-			
Relinquished by:	510010	7 11	000	Company	刑		Receive	d by	1	m			Dat	te/Time	-19		0905	Company TOSPV	
Relinquished by:	Date/frime:	• • • (900	Company			Receive	d by		1			Dat	te/Time:				Company	
Relinquished by:	Date/Time			Company			Receive	d by					Dat	te/Time:		_		Company	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						1	Cooler 7	Tempera	ture(s) °C	and Oth	er Rema	irks:		5	5.4)	15.	4		

Ver: 01/16/2019











amento Notes

	Job:
Fracking # 4840 2406 1391	SO /PO FO / 2-Day / Ground / UPS / Courier / GSO
	OnTrac / Goldstreak / USPS / Other
this form to record Sample Custody Seal, Cooler Cus in the job folder with the COC.	stody Seal, Temperature & corrected Temperature & other observations.
if the job folder with the COO.	A342
Notes:	Therm. ID: AK7 Corr. Factor: 40.50
	lce Wet Gel Other
1 1 2 0/1	
	Cooler Custody Seal: 732235
11/14/	Sample Custody Seal:
	Cooler ID:
	Temp Observed: 2.4° Corrected: 2.4°
	From: Temp Blank D Sample D
	NCM Filed: Yes D No D
	NCIVI FILED. TES LI NOLI
	Yes No NA
	Perchlorate has headspace?
	_ Alkalinity has no headspace?
	CoC is complete w/o discrepancies?
	Samples received within holding time?
	Sample preservatives verified?
	Samples w/o discrepancies?
	Containers are not broken or leaking?
	Samples w/o discrepancies? Sample containers have legible labels? Containers are not broken or leaking? Sample date/times are provided.
	Appropriate containers are used?
	Sample bottles are completely filled?
	Zero headspace?*
	Multiphasic samples are not present?
	Sample out of temp?
	-
the same is a larger and the same of the	Initials: Date:
	*Containers requiring zero headspace have no headspace, or hubble < 6 mm (1/4")

Client: Cardno, Inc Job Number: 600-185383-1

Login Number: 185383 List Source: Eurofins TestAmerica, Houston

List Number: 1

Creator: Daley, Phoenix 1

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td>Lab does not accept radioactive samples.</td>	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required

Eurofins TestAmerica, Houston

Page 27 of 31 6/5/2019

Client: Cardno, Inc Job Number: 600-185383-1

Login Number: 185383

List Number: 2

Creator: McNabb, Robert W

List Source: Eurofins TestAmerica, Burlington

List Creation: 05/17/19 11:01 AM

Question	Answer	Comment
Question		
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td>Lab does not accept radioactive samples</td>	N/A	Lab does not accept radioactive samples
The cooler's custody seal, if present, is intact.	True	732236, 732232
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0°C, 1.8°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins TestAmerica, Houston

Page 28 of 31

6/5/2019

Client: Cardno, Inc Job Number: 600-185383-1

Login Number: 185383 List Source: Eurofins TestAmerica, Corpus Christi

List Number: 3 List Creation: 05/17/19 10:24 AM

Creator: Viveros, Ashley D

ordator. Twords, Admoy B		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Client: Cardno, Inc Job Number: 600-185383-1

Login Number: 185383 List Source: Eurofins TestAmerica, Sacramento List Creation: 05/18/19 04:56 PM

List Number: 5 Creator: Chang Edric D

Creator: Chang, Edric D		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	732235
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Residual Chlorine Checked.

N/A

Client: Cardno, Inc Job Number: 600-185383-1

Login Number: 185383 List Source: Eurofins TestAmerica, Savannah List Number: 4

List Creation: 05/17/19 02:25 PM

Creator: Nobles, Terry G

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

N/A

Residual Chlorine Checked.